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February 15, 2002



Environmental Programs

Summary Report on the Joint Audit
of DoD Wastewater Treatment
Systems
(D-2002-051)

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Acronyms

| | |
|------------|---|
| CWA | Clean Water Act |
| DLA | Defense Logistics Agency |
| MoM | Measure of Merit |
| NPDES | National Pollutant Discharge Elimination System |
| ODUSD(I&E) | Office of the Deputy Under Secretary of Defense (Installations and Environment) |



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-4704


February 15, 2002

MEMORANDUM FOR DEPUTY UNDER SECRETARY OF DEFENSE
(INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)
DIRECTOR, DEFENSE LOGISTICS AGENCY
NAVAL INSPECTOR GENERAL
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Summary Report on the Joint Audit of DoD Wastewater Treatment
Systems (Report No. D-2002-051)

We are providing this report for your information and use. This report summarizes the results of the joint audit of DoD wastewater treatment systems performed by the Inspector General, DoD, and the Service audit agencies. This report contains no recommendations; therefore, written comments are not required.

We appreciate the courtesies extended to the staff. For additional information on this report, please contact Mr. William C. Gallagher at (703) 604-9270 (DSN 664-9270) (bgallagher@dodig.osd.mil) or Ms. Brenda J. Pappas at (703) 604-9313 (DSN 664-9313) (bpappas@dodig.osd.mil). See Appendix C for the report distribution. The audit team members are listed inside the back cover.


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Office of the Inspector General, DoD

Report No. D-2002-051

(Project No. D2000CK-0216.001)

February 15, 2002

Summary Report on the Joint Audit of DoD Wastewater Treatment Systems

Executive Summary

Introduction. The Office of the Deputy Under Secretary of Defense (Installations and Environment), formerly, the Office of the Deputy Under Secretary of Defense (Environmental Security), requested that the Inspector General, DoD; Army Audit Agency; Naval Audit Service; and Air Force Audit Agency perform a joint audit to determine whether the Services and the Defense Logistics Agency were reporting correct Clean Water Act information and how well the Services and the Defense Logistics Agency were managing their resources for wastewater treatment systems. The Clean Water Act requires all facilities that discharge wastewater to the waters of the U.S., including Federal facilities, to have permits that establish pollution limits and specify monitoring and reporting requirements. National Pollutant Discharge Elimination System permits, which are issued either by the Environmental Protection Agency or by a state having permitting authority from the Environmental Protection Agency, regulate pollutants discharged into surface waters by industrial, municipal, and other facilities. DoD Instruction 4715.6, "Environmental Compliance," established a measure of merit for gauging DoD compliance with its National Pollutant Discharge Elimination System permits in accordance with the Clean Water Act. The joint audit resulted in separate Service audit agency reports on each respective Service and an Inspector General, DoD, report on the Defense Logistics Agency. This report summarizes the following systemic issues from those reports: Clean Water Act information reporting at the Army, Navy, Air Force, Marine Corps, and Defense Logistics Agency and Clean Water Act measure of merit definitions.

Objectives. The objective of the joint audit was to determine whether DoD was accurately and consistently reporting the number of permits and permitted systems covered by the Clean Water Act and the number of systems in compliance with the Act. In addition, the joint audit assessed how DoD was managing its resources for wastewater treatment systems. This report summarizes the reports issued by the IG, DoD, and the Service audit agencies during the joint audit of DoD wastewater treatment systems. See Appendix A for a discussion of the scope and methodology.

Results. The Services and Defense Logistics Agency adequately managed resources for wastewater treatment systems. The Air Force, Marine Corps, and Defense Logistics Agency consistently and accurately reported the number of wastewater permits and permitted systems covered by the Clean Water Act and the number of systems in compliance with the Act. The Army and Navy did not accurately report the number of wastewater permits, permitted systems, and the number of systems in compliance. As a result, the Office of the Deputy Under Secretary of Defense

(Installations and Environment) does not have an accurate picture of Army and Navy compliance with the Clean Water Act, and DoD reports to Congress may not be accurate.

Actions Taken. During the joint audit, the Office of the Deputy Under Secretary of Defense (Installations and Environment) initiated action to revise the measure of merit to make informed resource decisions regarding DoD compliance with the Clean Water Act. The revised metric will measure the percent of wastewater discharges in compliance with applicable requirements, both U.S. and overseas, and annual costs of managing wastewater. The Deputy Under Secretary will require the Services and Defense Logistics Agency to semiannually report the total number of water pollution control permits, excluding temporary storm water construction permits, the number of water pollution control permits that are in compliance, and the cost of wastewater management. The Deputy Under Secretary plans to implement the Clean Water Act measure of merit and reporting requirements by early 2003. Based on the actions the Deputy Under Secretary has taken or initiated, this report makes no recommendations for additional corrective actions.

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Background

The Office of the Deputy Under Secretary of Defense (Installations and Environment) (ODUSD[I&E]), formerly, the Office of the Deputy Under Secretary of Defense (Environmental Security), requested that the Inspector General, DoD; Army Audit Agency; Naval Audit Service; and Air Force Audit Agency perform a joint audit to determine whether the Services and the Defense Logistics Agency (DLA) were reporting correct Clean Water Act (CWA) information and how well the Services and the DLA were managing their resources for wastewater treatment systems. The joint audit resulted in separate Service audit agency reports on each respective Service and an Inspector General, DoD (IG, DoD), report on the DLA (see Appendix B for a list of the audit reports). Only the Army Audit Agency report included recommended corrective actions. The summary report discusses the following systemic issues from the prior reports:

- CWA information reporting at the Army, Navy, Air Force, Marine Corps, and DLA and
- CWA measure of merit (MoM) definitions.

Clean Water Act. The CWA requires all facilities that discharge wastewater to the waters of the U.S., including Federal facilities, to have permits that establish pollution limits and specify monitoring and reporting requirements. The Environmental Protection Agency has primary authority for implementing and enforcing the CWA. National Pollutant Discharge Elimination System (NPDES) permits regulate pollutants discharged into surface waters by industrial, municipal, and other facilities. NPDES permits also regulate industrial point sources that discharge into other wastewater collection systems or that discharge directly into receiving waters. NPDES permits are issued either by the Environmental Protection Agency or by a state having permitting authority from the Environmental Protection Agency.

DoD Environmental Compliance. DoD Instruction 4715.6, "Environmental Compliance," April 24, 1996, requires the ODUSD(I&E) to monitor DoD environmental compliance. DoD Instruction 4715.6 established a MoM for gauging DoD compliance with its NPDES permits in accordance with the CWA. DoD compliance with the MoM is determined by the:

- number of NPDES permitted wastewater systems and
- number of systems meeting NPDES permit standards.

In May 1998, the ODUSD(I&E) revised the MoM so that DoD would not only focus on maintaining compliance but also look at pollution prevention alternatives as the means for achieving and maintaining compliance. The revised MoM to meet this goal was divided into two parts:

- CWA permitted water pollution control systems and activities shall be in compliance with their permit requirements and
- CWA pollution prevention nonrecurring investments shall increase to 15 percent of the total CWA nonrecurring investments (combined pollution prevention and compliance) by FY 2004.

To monitor the Services and DLA progress, the ODUSD(I&E) issues a semiannual data call for the Environmental Quality In Progress Review, requiring that the Services and DLA report the number of CWA permits, permitted systems, and permitted systems in compliance with the CWA. Additionally, the ODUSD(I&E) requires reporting of the total number of nonrecurring projects and associated costs that are required to achieve or maintain 100 percent compliance with CWA standards. Components are to include pollution prevention projects that are cost-effective measures. Data collected for the Environmental Quality In Progress Review supports the Defense Environmental Quality Program Annual Reports to Congress.

Services and DLA CWA Reporting. As of March 31, 2000, DoD Components reported 2,055 permits, 3,142 permitted systems, and 2,937 permitted systems in compliance with the CWA to the ODUSD(I&E). Table 1 shows CWA information reported by each Service and DLA.

Table 1. Clean Water Act Reporting

| | <u>Permits</u> | <u>Permitted Systems</u> | <u>Compliant Systems</u> |
|--------------|----------------|------------------------------|------------------------------|
| Army | 1,047 | 1,247 | 1,158 |
| Navy | 424 | 1,251 | 1,194 |
| Air Force | 444 | 426 | 399 |
| Marine Corps | 103 | 179 | 150 |
| DLA | <u>37</u> | <u>39</u> | <u>36</u> |
| Total | 2,055 | 3,142 | 2,937 |

Objectives

The objective of the joint audit was to determine whether DoD was accurately and consistently reporting the number of permits and permitted systems covered by the CWA and the number of systems in compliance with the CWA. In addition, the joint audit assessed how DoD was managing its resources for wastewater treatment systems. This report summarizes the reports issued by the IG, DoD, and the Service audit agencies during the joint audit of DoD wastewater treatment systems. See Appendix A for a discussion of the scope and methodology.

DoD Wastewater Treatment Systems

The Services and DLA adequately managed resources for wastewater treatment systems. The Air Force, Marine Corps, and DLA consistently and accurately reported the number of wastewater permits and permitted systems covered by the CWA and the number of systems in compliance with the CWA. The Army and Navy did not accurately report the number of wastewater permits, permitted systems, and the number of systems in compliance. The inaccurate reporting occurred because the CWA MoM definitions were ambiguous. As a result, the ODUSD(I&E) does not have an accurate picture of Army and Navy compliance with the CWA, and DoD reports to Congress may not be accurate.

Reporting of CWA Information

ODUSD(I&E) Data Call. The ODUSD(I&E) issued semiannual data calls to the Services and DLA for the Environmental Quality In Progress Review. These data calls required the Services and DLA to submit their total number of CWA permits, permitted systems, and permitted systems in compliance with the CWA. They also required reporting of nonrecurring projects and costs necessary to ensure their wastewater systems maintained 100 percent compliance with the CWA. The ODUSD(I&E) required the Services and DLA to categorize their permits and permitted systems into one of six classifications:

- domestic NPDES,
- industrial NPDES,
- stormwater NPDES,
- other permitted wastewater systems,
- discharge to publicly owned treatment works, and
- other CWA activities.

The "Definitions and Instructions for CWA Measures of Merit," April 14, 1998, (CWA MoM definitions) specified the CWA permits and permitted systems to be included under each classification, and what constituted a compliant system.

Services and DLA Reporting. The Army and Navy did not accurately report the number of wastewater permits and permitted systems covered by the CWA and the number of systems in compliance with the CWA. The Air Force, Marine Corps, and DLA consistently and accurately reported the number of wastewater permits and permitted systems covered by the CWA and the

number of systems in compliance with the CWA. Table 2 shows Service and DLA reporting of CWA information and audit results at 44 installations reviewed.

Table 2. Clean Water Act Reporting by DoD Component at Installations Reviewed as of March 31, 2000

| <u>Component/Installations</u> | <u>Permits</u> | <u>Permitted Systems</u> | <u>Compliant Systems</u> |
|--------------------------------|----------------|--------------------------|--------------------------|
| <u>Army/7</u> | | | |
| Reported | 80 | 173 | 82 |
| Audit Results | 155 | 159 | 68 |
| <u>Navy/22</u> | | | |
| Reported | 171 | 577 | 532 |
| Audit Results | 116 | 111 | 88 |
| <u>Air Force/8</u> | | | |
| Reported | 35 | 26 | 23 |
| Audit Results | 36 | 26 | 23 |
| <u>Marine Corps/2</u> | | | |
| Reported | 35 | 37 | 14 |
| Audit Results | 32 | 34 | 12 |
| <u>DLA/5</u> | | | |
| Reported | 13 | 15 | 14 |
| Audit Results | 13 | 15 | 13 |

Army Reporting. The Army Audit Agency reviewed seven Army installations and determined that Army did not accurately report the number of permits, permitted systems, and systems in compliance with the CWA. The Army under-reported permits and over-reported permitted systems and compliant systems because CWA MoM definitions were ambiguous. Examples of the reporting inaccuracies were: permits incorrectly categorized, permits reported with no systems identified, and systems reported without a supporting permit.

Navy and Marine Corps Reporting. The Naval Audit Service reviewed 22 Navy installations and determined that the Navy did not accurately report the number of permits, permitted systems, or compliant systems. The Navy over-reported permits, permitted systems, and compliance because the CWA MoM definitions were ambiguous. The Navy reported permits that were not permits and incorrectly categorized permits. The Naval

Audit Service also reviewed two Marine Corps installations and concluded that the installations accurately and consistently reported the number of permits, permitted systems, and compliant systems.

Air Force Reporting. The Air Force Audit Agency reviewed eight Air Force installations and determined that the Air Force installation environmental managers accurately and consistently reported the number of permits, permitted systems, and compliant systems in accordance with Air Force interpretation of the CWA MoM definitions. Air Force environmental managers analyzed report number differences from year to year, determined the causes, and maintained documentation to support each change.

DLA Reporting. The IG, DoD, reviewed five DLA organizations and determined that DLA accurately and consistently reported the number of permits, permitted systems, and compliant systems. DLA organizations experienced difficulties when information on permits and systems were reported and categorized to the DLA Headquarters Environmental Quality and Safety Policy Office. However, the Environmental Quality and Safety Policy Office made changes to correct inaccurate reporting or categorizations by the DLA organizations prior to submitting the figures to the ODUSD(I&E).

CWA MoM Definitions

The Army and Navy did not accurately report CWA information because of the ambiguity of the CWA MoM definitions. The Air Force and DLA also had difficulty interpreting the CWA MoM definitions.

Army Interpretation. The Army reported inaccurate CWA information because the CWA MoM definitions were unclear, inconsistent, or misinterpreted. Some Army installations had difficulty interpreting definitions for storm water permits and discharges to publicly owned treatment works or other nationally permitted treatment works. In addition, the MoM definitions were not clear on how to report other permitted wastewater systems with multiple permits for the same system. The Army Audit Agency report provided recommendations to improve Army reporting of CWA information and recommended the Army coordinate with DoD and the other Services to improve and clarify guidance for reporting under the CWA MoM. The Army Office of the Assistant Chief of Staff for Installation Management agreed with the recommendations and stated that they worked with the CWA Services Steering Committee to clarify the guidance.

Navy Interpretation. The Navy tried to comply with MoM reporting requirements but had difficulty with the ambiguity of the language used to define the number of permits and systems to report. The Naval Audit Service report did not provide recommendations to the Navy because the ODUSD(I&E) was in the best position to clarify CWA MoM reporting requirements.

Air Force Interpretation. Air Force environmental managers had difficulty interpreting the MoM definitions. For example, the definition of water pollution control permitted systems did not provide clear guidance for counting the separate wastewater systems at one Air Force installation. Air Force environmental managers could not readily identify the number of separate systems when wastewater from an industrial treatment plant flowed into a domestic plant where it was again treated along with domestic wastewater before final discharge to a river. The Air Force Audit Agency did not make recommendations to the Air Force because the ODUSD(I&E) was in the best position to clarify the CWA MoM definitions.

DLA Interpretation. The DLA organizations experienced difficulties reporting CWA information because the CWA MoM definitions were ambiguous and did not address the vast differences in the structure of the systems and the permit language. In addition, DLA organizations expressed confusion over whether a system was compliant or noncompliant. Most DLA organizations considered a system compliant until it received a notice of violation from the regulating authority. The IG, DoD, did not make recommendations in their report on the DLA because the ambiguity of the CWA MoM definitions would be addressed in this report.

As a result of the ambiguity of the MoM definitions, the ODUSD(I&E) does not have an accurate picture of Army and Navy compliance with the CWA. In addition, the NPDES Permitted Systems section of the Defense Environmental Quality Program Annual Reports to Congress may not be accurate because of the erroneous Army and Navy information.

Wastewater Treatment Systems Resources

The joint audit determined that the Army, Navy, Air Force, and DLA were adequately managing their resources for wastewater treatment systems. Army installations adequately planned and budgeted for environmental projects to ensure compliance of their wastewater systems. The Navy operated its wastewater treatment plants effectively and efficiently and budgeted adequately to comply with CWA requirements. Air Force installations effectively managed their wastewater systems budgets, and documentation supporting planned and budgeted wastewater projects showed that Air Force environmental managers proactively targeted actual and potential wastewater compliance issues. The Marine Corps budgeted adequately for wastewater treatment systems but could not operate its wastewater treatment plants efficiently and effectively because of the plants' poor physical condition. DLA organizations adequately planned projects to replace sewer pipes, upgrade pump station and flow meters, and repair systems to prevent groundwater infiltration.

Actions Taken on CWA Guidance

During the joint audit, the ODUSD(I&E) initiated action to revise the MoM to make informed resource decisions regarding DoD compliance with the CWA. In August 2001, the ODUSD(I&E) issued a draft revision of the CWA MoM to the Services and DLA for review and comment. The revised MoM will measure the percent of wastewater discharges in compliance with applicable requirements within the U.S. (CWA permits) and overseas (in accordance with Final Governing Standards or the Overseas Environmental Baseline Guidance Document or international treaties). The MoM will also measure annual costs of managing wastewater. The ODUSD(I&E) will require the Services and DLA to semiannually report:

- number of water pollution control permits, excluding temporary storm water construction permits,
- number of water pollution control permits that are in compliance, and
- cost of wastewater management.

The ODUSD(I&E) developed a list of compliance questions to assist the Services and DLA in determining compliance status. The ODUSD(I&E) plans to implement the CWA MoM and reporting requirements by early 2003 as part of the Environmental Quality In Progress Review. The Review also includes seven other revised pollution prevention and compliance metrics and/or reporting requirements. ODUSD(I&E) plans to provide the Services and DLA with a preliminary copy of the revised metrics and reporting requirements in June 2002, so the Services and DLA can modify their tracking systems to accommodate the metrics. Based on the actions the ODUSD(I&E) has taken or initiated, this report makes no recommendations for additional corrective actions.

Appendix A. Scope and Methodology

This report summarizes the joint audit of DoD wastewater treatment systems performed from June 2000 through November 2001. The Inspector General, DoD; the Army Audit Agency; the Naval Audit Service; and the Air Force Audit Agency participated in the joint audit and issued reports (see Appendix B for a list of the reports). During preparation of the summary report, we interviewed the ODUSD(I&E) personnel to determine corrective actions either taken or planned that addressed the systemic issues with CWA information reporting identified by the joint audit. We reviewed audit summaries and selected working papers of our review of the Defense Logistics Agency and summaries provided by the Service audit agencies.

Use of Computer-Processed Data. We did not rely on computer-processed data.

Contacts. We visited or contacted individuals and organizations within the DoD. Further details are available upon request.

Appendix B. Audit Reports on DoD Wastewater Treatment Systems

Four audit reports were issued on DoD Wastewater Treatment Systems. The Inspector General, DoD, report can be accessed on the Internet at <http://www.dodig.osd.mil>. The Army Audit Agency report can be accessed on the Internet at <http://www.hqda.army.mil/AAAWEB>. The Naval Audit Agency report can be accessed on the Internet at <http://www.hq.navy.mil/naualaudit>. The Air Force Audit Agency report can be accessed on the Internet at <http://www.afaa.hq.af.mil>.

Inspector General, DoD

Inspector General, DoD, Report No. D-2001-087, "Defense Logistics Agency Wastewater Treatment Systems," March 26, 2001

Army

Army Audit Agency Report No. AA 02-045, "Army Wastewater Systems," November 9, 2001

Navy

Naval Audit Service Report No. N2001-0019, "Naval Wastewater Treatment Systems," March 27, 2001

Air Force

Air Force Audit Agency Report No. 00052018, "Clean Water Act Reporting and Budgeting," March 5, 2001

Appendix C. Report Distribution

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